

REMARKS

I. Introduction

In view of the following remarks, reconsideration of the rejections contained in the Office Action of February 18, 2009 is respectfully requested.

II. Prior Art Rejections

Currently, claims 17-19, 24-29, and 34-36 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over Sienel (US 6,606,867) and claims 20-23 and 30-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sienel.

As a preliminary matter, Applicants note that the Sienel reference does not constitute prior art under 35 U.S.C. § 102(b) as asserted on page 2 of the Office Action. As such, Applicants request withdrawal of the Office Action.

Further, claims 17 and 27 are patentable over Sienel for the following reasons. Claim 17 requires a compression refrigeration system comprising, *inter alia*, a controller operable to estimate a parameter value reflecting energy consumption to determine an optimum high-side pressure by perturbation of the high-side pressure during operation of said compression refrigeration system, wherein said compression refrigeration system operates at the optimum high-side pressure after the optimum high-side pressure has been determined. Similarly, claim 27 requires a method of operating a compression refrigeration system comprising, *inter alia*, estimating a parameter value reflecting energy consumption to determine an optimum high-side pressure by perturbation of the high-side pressure during operation of the compression refrigeration system, and operating the compression refrigeration system at the optimum high-side pressure after the optimum high-side pressure has been determined.

Regarding the first underlined portion above, the Office Action cites to column 2, lines 53-63 and column 3, lines 43-50 of the Sienel reference. Notably, those two passages in the Sienel reference discuss different embodiments; lines 53-63 of column 2 clearly refer to figure 1, which is labeled “prior art,” and lines 43-50 of column 3 clearly refer to figure 3, which depicts the claimed apparatus. A combination of two distinct embodiments cannot form the basis of an anticipation rejection, even if the two embodiments are disclosed in the same reference. See MPEP 2131.01 (“The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)); See also *Net MoneyIn v. Verisign*, 545 F.3d 1359 (Fed Cir. 2008) (holding that an anticipation rejection is improper where two distinct examples in a prior art reference are relied on and no single example contains all of the claim limitations; “Because the hallmark of anticipation is prior invention, the prior art reference, in order to anticipate under § 102, must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements arranged as in the claim;” “[I]t was error for the district court to find anticipation by combining different parts of the separate protocols in the iKP reference simply because they were found within the four corners of the document...””) The anticipation rejection set forth in the Office Action improperly relies on a combination of two distinct examples; as such, Applicants respectfully request withdrawal of the rejection.

Further, notwithstanding the fact that the two passages of Sienel cannot support an anticipation rejection as discussed above, neither of those passages meets the requirements of claims 17 or claim 27. Claim 17 requires a controller operable to estimate a parameter value reflecting energy consumption; claim 27 requires a method including the step of estimating a parameter value reflecting energy consumption. Column 2, lines 53-63 of Sienel merely

discloses that “[b]y regulating the high pressure of the system 10, the capacity and/or efficiency of the system 10 can be controlled and optimized.” Merely controlling or optimizing the efficiency of a system does not constitute *estimating a parameter value reflecting energy consumption*. Column 3, lines 43-50 of Sienel discloses that “[c]ontrol 50 is programmed to evaluate the state the cycle 10 [sic] and determine a desired pressure in cooler 14. Once a desired pressure has been determined, the valves 28 and 30 are controlled to regulate the pressure.” Merely determining a desired pressure, controlling valves, and regulating pressure does not constitute *estimating a parameter value reflecting energy consumption*. Because Sienel does not disclose a controller operable to estimate a parameter value reflecting energy consumption, Sienel cannot meet the requirements of claim 17; because Sienel does not disclose a method step of estimating a parameter value reflecting energy consumption, Sienel cannot meet the requirements of claim 27.

Further still, Sienel does not disclose estimating the aforementioned parameter value to determine an optimum high-side pressure by perturbation of the high-side pressure as required in claim 27, nor a controller operable to do so, as required in claim 17. The Office Action cites column 2, lines 60-63 of the Sienel reference as disclosing this limitation. To the contrary, that passage of Sienel states “By regulating the high pressure of the system 10, the optimal pressure of the system 10, which changes as the operation conditions change, can be selected.” Selecting an optimal pressure does not constitute determining an optimum pressure by perturbation of the high-side pressure. In line 18 of page 2 of the Office Action, the Examiner equates the word “perturbation” with the word “change;” however, the Sienel reference merely discloses that operating conditions change resulting in a change in the optimal pressure; the Sienel reference does not disclose determining an optimum pressure *by perturbation* (i.e. *by change*) of the high-

side pressure, nor a controller operable to do so. As such, the Sienel reference cannot meet the requirements of claims 17 or 27.

It is thus submitted that the invention of the present application, as defined in claims 17 and 27, is not anticipated nor rendered obvious by the prior art, and yields significant advantages over the prior art. Allowance is respectfully requested.

Claims 18-26 depend, directly or indirectly, from claim 17 and are thus allowable for at least the reasons set forth above in support of claim 17. Claims 28-36 depend, directly or indirectly, from claim 27 and are thus allowable for at least the reasons set forth above in support of claim 27.

In addition to being allowable by virtue of their dependencies, at least claims 21 and 31 set forth further limitations which are not disclosed by the Sienel reference and are not obvious in view of the Sienel reference. In particular, claim 21 requires “wherein said controller estimates the parameter value by increasing the high-side pressure, monitoring an impact of increasing the high-side pressure on a difference in temperature between the refrigerant and the heat sink, and discontinuing increasing the high-side pressure when the impact is below a threshold level. Similarly, claim 31 requires “wherein said estimating of the parameter value comprises: increasing the high-side pressure, monitoring an impact of increasing the high-side pressure on a difference in temperature between the refrigerant and the heat sink, discontinuing increasing the high-side pressure when the impact is below a threshold level.”

The Office Action states, at page 4, that “Sienel further teaches increasing the high side pressure until an optimal level (e.g., an optimal threshold) is reached (column 3, line 60 - column 4, line 3).” Sienel undoubtedly discloses increasing the high side pressure; however, Sienel does not disclose *estimating the parameter value* by doing so, as required by claims 21 and 31.

Further, Sienel does not disclose *monitoring an impact* of the increase in high-side pressure. Further still, Sienel does not disclose discontinuing the increase in high-side pressure when *the impact* is below a threshold level. As such, Sienel cannot meet the requirements of claims 21 and 31. Further, no assertion is made in the Office Action that it would have been obvious to modify the Sienel reference to yield a configuration which meets the aforementioned limitations of claims 21 and 31.

In view of the foregoing remarks, inasmuch as all of the outstanding issues have been addressed, Applicants respectfully submit that the present application is now in condition for allowance, and action to such effect is earnestly solicited. Should any issues remain after consideration of the response, however, the Examiner is invited to telephone the undersigned at the Examiner's convenience.

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975, with the EXCEPTION of deficiencies in fees for multiple dependent claims in new applications.

Respectfully submitted,

Kare AFLEKT et al.

/Andrew D. St.Clair/

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Andrew D. St.Clair
Registration No. 58,739
Attorney for Applicants

ADS/CRW/rgf
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
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